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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,064

06/22/2006

Takeshi Takahashi

2006-1011A

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7590

09/30/2009

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EXAMINER

CZEKAJ, DAVID J

ART UNIT

PAPER NUMBER

2621

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,064	Applicant(s) TAKAHASHI ET AL.	
	Examiner DAVID CZEKAJ	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/22/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: The first instance of DMD needs to be spelled-out (un-abbreviated) to more clearly indicate what DMD stands for. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schechterman et al. (2002/0154215), (hereinafter referred to as "Schechterman") in view of Kuseko et al. (2002/0001030), (hereinafter referred to as "Kuseko").

Regarding claim 1, Schechterman discloses an apparatus that relates to a stereoscopic image pick up device (Schechterman: paragraph 0002). This apparatus comprises "an image generating device for classifying, in accordance with a perspective distance, pieces of data representing a plurality of objects and outputting the data" (Schechterman: figures 1-2; paragraphs 0235-0237), "a display device for executing a display process and for emitting lights, which represent the objects multiplexed on a time axis" (Schechterman: figure 2), "a focal length changing device for providing stereoscopic effect to each object and for generating the lights" (Schechterman: paragraph 0414, wherein the mirrors

change the focal length), “an optical path branching circuit for branching, by changing an interval of a tilt of the mirror, a plurality of lights” (Schechterman: figure 2; paragraph 0414-0416), and “a focal length changing section for providing the stereoscopic effect to each of the objects” (Schechterman: figure 2). However, this apparatus lacks the selecting circuit as claimed. Kuiseko teaches that prior art display systems disturb the viewing field of the apparatus (Kuiseko: paragraph 0007). To help alleviate this problem, Kuiseko discloses “an optical path selecting circuit for selecting by changing a tilt of mirror of the DMD, at the predetermined interval the partial lights for sequentially outputting the partial lights, and generating three-dimensional image lights” (Kuiseko: figures 1-3; paragraph 0041-0043). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Schechterman and add the processing taught by Kuiseko in order to obtain an apparatus that will not disturb the viewing field of the imaging system.

Regarding claim 2, Schechterman discloses “the focal length changing section comprises an optical component having a focal length assigned to a light” (Schechterman: paragraph 0414).

Regarding claim 3, although not disclosed, it would have been obvious for the component to be a convex or concave lens or mirror (Official Notice). Doing so would have been obvious in order to correctly reflect the light to the imaging system.

Regarding claim 4, Schechterman discloses “the optical component is a holographic element” (Schechterman: paragraph 0383).

Regarding claim 5, Schechterman discloses “the focal length changing devices are connected in series” (Schechterman: figures 12-15).

Regarding claim 6, note the examiners rejection for claim 2, and in addition, Kuiseko discloses “a focal length of a combination of optical components selected from each of the changing sections is different from each other” (Kuisseko: figure 2).

Regarding claim 7, Schechterman in view of Kuiseko disclose “reflecting a three-dimensional light outputted by the focal length changing device” (Schechterman: figures 1-3; Kuiseko: figure 2).

Regarding claim 8, Kuiseko discloses “objects three-dimensionally synthesized therein is recognized by the observer” (Kuisseko: figure 2; paragraph 0055).

Regarding claim 9, Schechterman discloses “reflecting light in a predetermined direction and transmitting light entering in from behind the component” (Schechterman: figures 2 and 12-13).

Regarding claim 10, although not disclosed, it would have been obvious for the reflection component to be a half mirror, total mirror, and holographic element (Official Notice). Doing so would have been obvious in order to ensure the light was reflected properly.

Regarding claim 11, Schechterman discloses "the DMD includes micro mirrors and changes a tilt of the mirror to select a part of the light" (Schechterman: paragraph 0204).

Regarding claim 12, Schechterman discloses "the micro mirror corresponds to a part in which there is no object" (Schechterman: figures 1-3; paragraph 0204).

Regarding claim 13, Schechterman discloses "the mirror corresponds to part on a far side of a part in which objects overlap" (Schechterman: figures 1-3; paragraph 0204).

Regarding claim 14, note the examiners rejection for claims 9 and 13.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-7204592	04-2007	ODonnell et al.
US-5835264	10-1998	Tandler et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID CZEKAJ whose telephone number is (571)272-7327. The examiner can normally be reached on Mon-Thurs and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dave Czekaj/
Primary Examiner, Art Unit 2621